

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	-60	V
Collector-Emitter Voltage	V _{CEO}	-50	V
Emitter-Base Voltage	V _{EB0}	-6	V
Collector Current - Continuous (Note 5)	I _C	-150	mA

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5) T _A = +25°C	P _D	150	mW
Thermal Resistance, Junction to Ambient (Note 5)	R _{θJA}	833	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

ESD Ratings (Note 6)

Characteristic	Symbol	Value	Unit	JEDEC Class
Electrostatic Discharge - Human Body Model	ESD HBM	4,000	V	3A
Electrostatic Discharge - Machine Model	ESD MM	400	V	C

Notes: 5. For a device mounted with the collector lead on minimum recommended pad layout 1oz copper that is on a single-sided 1.6mm FR-4 PCB; device is measured under still air conditions whilst operating in a steady-state.
6. Refer to JEDEC specification JESD22-A114 and JESD22-A115.

Thermal Characteristics and Derating Information

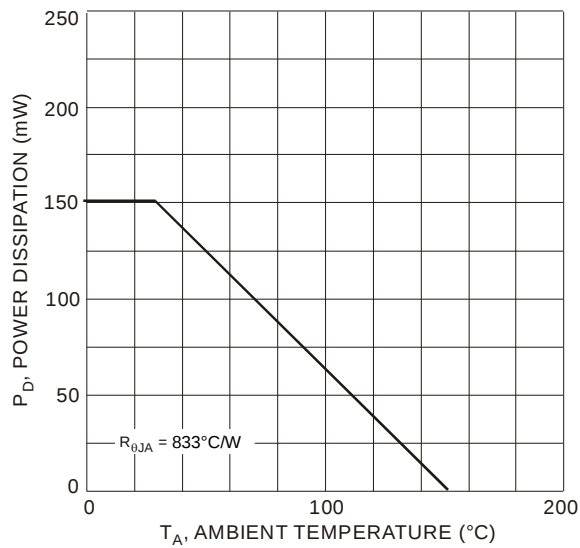


Fig. 1 Power Dissipation
vs. Ambient Temperature (Note 5)

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 7)						
Collector-Base Breakdown Voltage	V _{(BR)CBO}	-60	—	—	V	I _C = -50μA, I _E = 0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	-50	—	—	V	I _C = -1mA, I _B = 0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	-6	—	—	V	I _E = -50μA, I _C = 0
Collector Cutoff Current	I _{CBO}	—	—	-100	nA	V _{CB} = -60V
Emitter Cutoff Current	I _{EBO}	—	—	-100	nA	V _{EB} = -6V
ON CHARACTERISTICS (Note 7)						
DC Current Gain	2DA1774Q 2DA1774R 2DA1774S h _{FE}	120 180 270	— — —	270 390 560	—	V _{CE} = -6V, I _C = -1mA
Collector-Emitter Saturation Voltage	V _{CE(sat)}	—	—	-0.5	V	I _C = -50mA, I _B = -5mA
SMALL SIGNAL CHARACTERISTICS						
Output Capacitance	C _{obo}	—	4.0	5.0	pF	V _{CB} = -12V, f = 1MHz, I _E = 0
Current Gain-Bandwidth Product	f _T	—	140	—	MHz	V _{CE} = -12V, I _C = -2mA, f = 30MHz

Notes: 7. Measured under pulsed conditions. Pulse width ≤ 300μs. Duty cycle ≤ 2%.

Typical Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

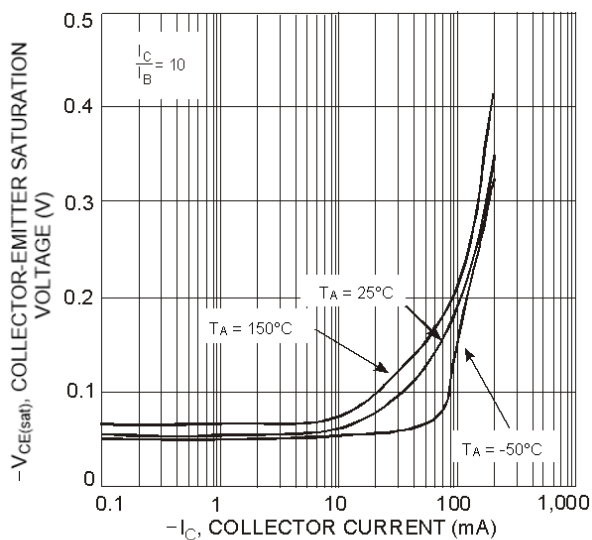


Fig. 2 Typical Collector-Emitter Saturation Voltage vs. Collector Current

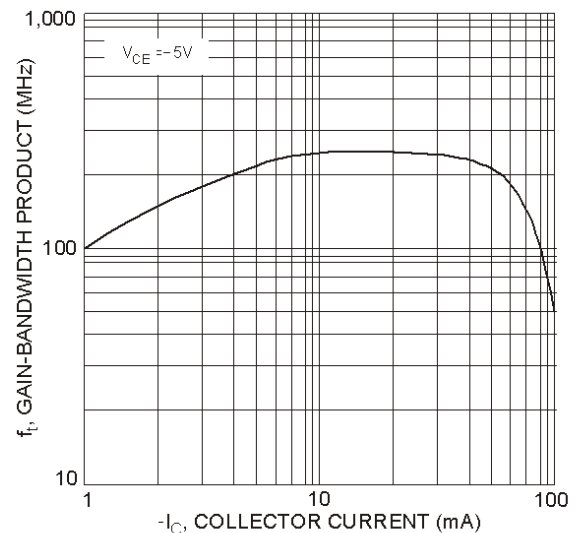
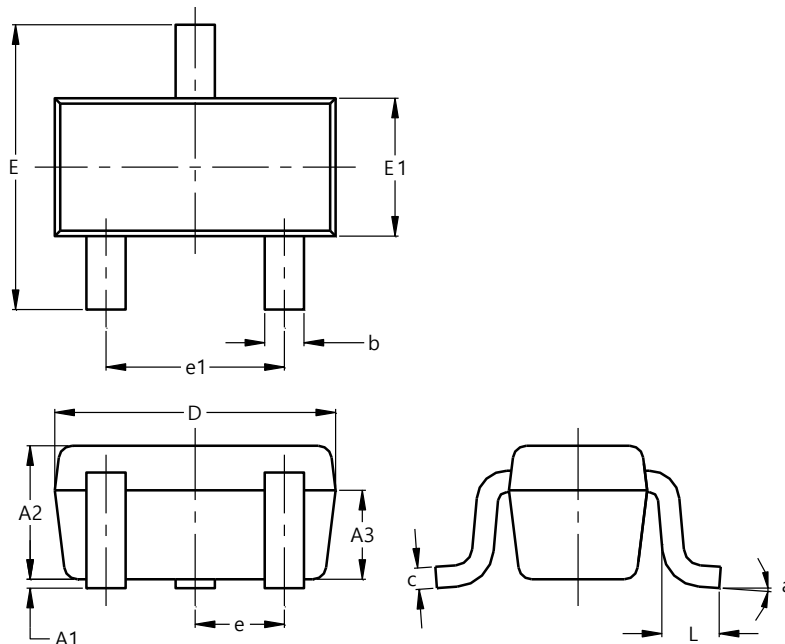


Fig. 3 Typical Gain-Bandwidth Product vs. Collector Current

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

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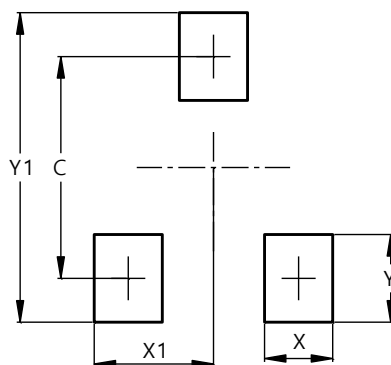


SOT523			
Dim	Min	Max	Typ
A1	0.00	0.10	0.05
A2	0.60	0.80	0.75
A3	0.45	0.65	0.50
b	0.15	0.30	0.22
c	0.10	0.20	0.12
D	1.50	1.70	1.60
E	1.45	1.75	1.60
E1	0.75	0.85	0.80
e	0.50 BSC		
e1	0.90	1.10	1.00
L	0.20	0.40	0.33
a	0°	--	8°
All Dimensions in mm			

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

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Dimensions	Value (in mm)
C	1.29
X	0.40
X1	0.70
Y	0.51
Y1	1.80

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